

CASE NOTES

Submitted by Section Editor, Matthew Barnhill, Ph.D.

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CASE NOTES: #1
MIXED PRESCRIPTION DRUG DEATHGeorge F. Jackson, Ph.D., William A. Dunn, M.S., Zhongxue Hua, M.D., Ph.D., E.H.A. Institute of Forensic Science
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This laboratory has been detecting an increase in the prevalence of multiple prescribed opioid compounds in drug related postmortem cases. In most of our cases, the decedents have a history of taking prescription medications for pain relief.

We present a case of post-mortem analysis of a 36 year old single white male who consumed Oxycontin, Xanax and Actiq (fentanyl lollipop).

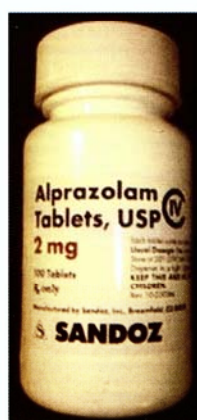
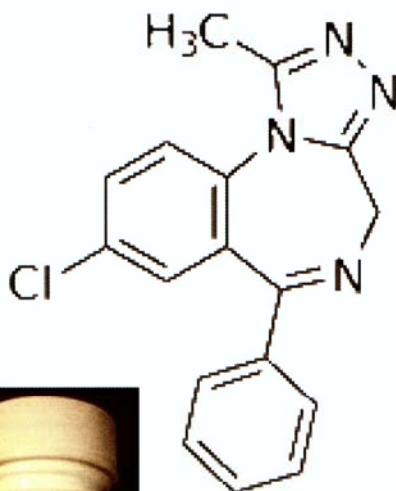


Oxycontin tablets in varying strengths.



The decedent had morbid obesity (BMI of 46) with a long history of lower back pain for at least 6 years. His clinical work-up for his lower back pain was inconclusive, although a spinal surgery for disc fusion was suggested at one point. He was known to visit various pain clinics and acquired prescription Actiq for at least 18 months. Per multiple co-workers, he demonstrated a typical pattern of opioid compound addiction which interfered with his job performance significantly. During his last year, he was admitted twice to a local rehabilitation center for his addition to Oxycontin and Xanax. Of note, per multiple co-workers and family members, the decedent had no prior suicidal ideation or attempts.

The decedent was discovered in his residence with early decomposition after failing to report to work as an accountant. Scene investigation found a fentanyl lollipop inside his shirt pocket as well as crushed pill fragments scattered on the floor and table. Multiple bottles of prescription oxycodone and alprazolam, some empty and others nearly full, were located at the scene. Autopsy revealed hypertensive cardiovascular disease and focal bronchopneumonia, and both were not considered to be medically significant. Comprehensive analysis was performed on various postmortem tissues, including femoral blood, urine, bile, vitreous fluid, stomach content, brain, liver, kidney, lung and spleen.



The chemical structure of Alprazolam and the pharmaceutical packaging of the 2mg tablets.



Actiq, the oral delivery system of fentanyl citrate comes in different flavors and strengths of lollipops.

All submitted tissues were subject to standard analytical screening and mass spectrometry confirmation protocols. Positive findings of the analysis are as follows:

Blood		
Oxycodone		1.86mg/L
Oxymorphone		0.072 mg/L
Fentanyl		64 mcg/L
Liver		
Oxycodone		1.83 mg/Kg
Oxymorphone		0.12 mg/Kg
Fentanyl		96 mcg/Kg
Stomach Contents		
Total weight received:		244 gms
Oxycodone		147 mg/Kg
Oxymorphone		0.62 mg/Kg
Fentanyl		3648 mcg/Kg
Urine		
Oxycodone		5.82 mg/L
Oxymorphone		0.36 mg/L
Fentanyl		890 mcg/L
a-hydroxyalprazolam		1.60 mg/L
Alprazolam		0.35 mg/L